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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/604,491

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Christos J. Georgiou

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EXAMINER

KIM, KENNETH S

ART UNIT

PAPER NUMBER

2111

DATE MAILED: 02/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/604,491

Applicant(s)

GEORGIU ET AL

Examiner

Kenneth S. KIM

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.


- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 23-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
KENNETH S. KIM  
PRIMARY EXAMINER

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>Aug13'03, Jul25'03</u> | 6) <input type="checkbox"/> Other: _____  |

1. Claims 1-22 have been elected for examination and claims 23-30 remain withdrawn.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4-10, 12-19, 21, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhao, U.S. Patent Application Publication No. 2003/0105906.

Zhao teaches the invention as claimed in claim 1 including a microprocessor system for use in an SOC IC (par. 22, line 3) comprising a communications bus (bus lying between 17 and 16), said microprocessor subsystem comprising:

(a) two or more microprocessor devices formed as a single processor core assembly and capable of performing operations to implement a given processing functionality (10),

(b) a memory storage device associated with said two or more microprocessor devices in said sub-system for storing at least one of data and instructions in said single processor core assembly (12, 14),

(c) an interconnect means (fig. 1) residing in said single processor core assembly for enabling

communication between said two or more microprocessor devices and said SOC IC communications bus device, whereby said single processor core assembly may communicate with components of said SOC IC (16), and

further teaches as in claims 2, 4-10, 12, and 13,

(d) said single processor core assembly operate under program control to enable a specific set of functionalities (par. 23, line 7) – claim 2,

(e) said interconnect means comprises a communications bus (fig. 9, 16 couples to the bus), said microprocessor subsystem implementing packet communications processing functionality, and interface devices capable of receiving communications according to a network communications protocol – claims 4-8

(f) programmable processor local bus bridge (15, 17) with memory (44, 54) – claims 9, 10, and 12,

(g) means for polling said communications bus for handling network protocol communications (par. 40, line 13) – claim 13.

The multi-threading (enabled by multiple processors) network processor claims 14-19, 21, and 22 are equivalently rejected based on the same reason.

4. Claims 1, 2, 3, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Gary et al, U.S. Patent No. 6,662,253.

Gary et al teaches the invention as claimed in claim 1 including a microprocessor system for use in an SOC IC (col. 1, line 50) comprising a communications bus (114), said microprocessor subsystem comprising:

(a) two or more microprocessor devices formed as a single processor core assembly and capable of performing operations to implement a given processing functionality (201),

(b) a memory storage device associated with said two or more microprocessor devices in said sub-system for storing at least one of data and instructions in said single processor core assembly (112),

(c) an interconnect means (205) residing in said single processor core assembly for enabling communication between said two or more microprocessor devices and said SOC IC communications bus device, whereby said single processor core assembly may communicate with components of said SOC IC (202), and

further teaches as in claims 2, 3, and 11,

(d) under program control to enable a specific set of functionalities (col. 2, line 67; col. 3, line 5) – claim 2,

(e) said interconnection means comprises a switch fabric (205) – claims 3 and 11.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2111

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 11, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao, U.S. Patent Application Publication No. 2003/0105906 in view of Ryu et al, submitted by the applicant.

Zhao teaches the invention substantially as claimed as set forth in paragraph 3 above, however, does not expressly state that the interconnection means is a switch fabric.


Ryu et al teaches the use of switch fabric to interconnect two or more processors to a communications bus (figs. 2 and 4).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made that the interconnection can be of any form including the switch fabric. The person would have been motivated to implement the switch fabric to interconnect as a design alternative.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth S KIM whose telephone number is (571) 272-3627. The examiner can normally be reached on M-F (8:30-17:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (571) 272-3632. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for all communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

  
KENNETH S. KIM  
PRIMARY EXAMINER